

PATENT COOPERATION TREATY

PCT


INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 30 MAY 2006

WIPO PCT

Applicant's or agent's file reference H2826 PCT	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2005/002547	International filing date (day/month/year) 10.03.2005	Priority date (day/month/year) 11.03.2004	
International Patent Classification (IPC) or national classification and IPC INV. A61C5/06 B05C17/005 B65D81/32			
Applicant 3M ESPE AG et Al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 18.08.2005		Date of completion of this report 30.05.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Chabus, H Telephone No. +31 70 340-2684	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2005/002547

Box No. I Basis of the report

1. With regard to the **language**, this report is based on

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-18 as originally filed

Claims, Numbers

1-26 as originally filed

Drawings, Sheets

1/4-4/4 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has, within the applicable time limit:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest and, where applicable, the protest fee.
 - ☐ paid additional fees under protest but the applicable protest fee was not paid.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-26
	No: Claims	
Inventive step (IS)	Yes: Claims	1-26
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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1. Reference is made to the following documents:

D1 : WO 00/23002 A (DENTSPLY INT INC) 27 April 2000 (2000-04-27)
D2 : US 3 464 412 A (SCHWARTZ BORIS) 2 September 1969 (1969-09-02)
D3: FR-A-2 286 658 (FERRI PISANI JEROME) 30 April 1976 (1976-04-30)

Re Item IV.

2. The separate inventions/groups of inventions are:

Invention I: Claims 1-10, 20-26: Mixing capsule with by-pass means

Invention II: claims 11-19: Storing capsule with hardenable sealing means

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The prior art has been identified as document D1 and discloses:

- a capsule for storage and mixing and dispensing of material comprising:
- a capsule body member (10) providing a main chamber (8) , and comprising a dispensing opening (13);
- an applicator member (20) being slidably accommodated in said capsule body member, said applicator member (20) providing an auxiliary chamber (50) ; and an activator member (40) being slidably accommodated in said applicator member; said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers upon activation of said capsule by said activator member (see page 7 lines 2-4 and figure 1)

It follows that the following technical features make a contribution over the prior art and can be considered as special technical features within the meaning of Rule 13.2 PCT:

Claim 1: through-hole extending from the auxiliary chamber to the outer surface of the applicator member and a recessed area in the inner wall of the capsule.

Claim 11: internal channel system extending from the rear end of the activator member to an annular groove remote from the rear end of said activator member.

The problem solved by these special technical features can therefore be construed as:

Invention I: Providing a capsule for storing, mixing and dispensing material having an alternative way to mix the two components.

Invention II: Hermetically sealing a capsule after it has been filled in with components.

The identified special technical features are not the same and do not correspond as they solve different problems. Consequently, this authority considers that the separate inventions or groups of inventions mentioned above are not so linked as to form a single general inventive concept.

Re Item V.

Invention I

3. INDEPENDENT CLAIM 1

Document D2 discloses (the references in parentheses applying to this document):

a medical syringe suitable for storage and mixing and dispensing of dental material comprising:

a capsule body member (20) providing a main chamber (49), and comprising a dispensing opening (42), and wherein the inner wall of the capsule body member comprises a recessed area (24);

an applicator member (30) being slidably accommodated in said capsule body member (20), said applicator member (30) providing an auxiliary chamber (45), and wherein said applicator member (30) comprises a through-hole (34) extending from the auxiliary chamber (45) to the outer circumferential surface of the applicator member (30; and

an activator member (35) being slidably accommodated in said applicator member; said through-hole and said recessed area forming a channel between said main chamber and said auxiliary chamber;

said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers (see column 3 line 64 to column 5 line 46 and figures 1-4).

The subject-matter of claim 1 therefore differs from this known capsule in that: movement of said activator member **towards said dispensing opening** causes movement of said applicator member so that said channel between said main chamber and said auxiliary chamber is formed.

The problem to be solved by the present invention may therefore be regarded as providing an alternative capsule.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The solution proposed in the claim is formulated more in terms of the result to be achieved than in terms of clear technical features. According to the description and figures, the involved features consist in the place where the recessed area is situated within the capsule. In the storage position, the applicator member is retracted such that the recessed area is placed between the applicator member and the dispensing opening.

The skilled person would not regard as obvious to modify the device known from D2 by adding the above mentioned features. In D2, the mixing of the two compounds is achieved by pulling the plunger away from the dispensing opening.

4. DEPENDENT CLAIMS 2-10, 20-26

Claims 2-10 , 20-26 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Invention II

5. INDEPENDENT CLAIM 11

- 5.1 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):
- a capsule for storage and mixing and dispensing of material comprising:
 - a capsule body member (10) providing a main chamber (8) , and comprising a dispensing opening (13);
 - an applicator member (20) being slidably accommodated in said capsule body

member, said applicator member (20) providing an auxiliary chamber (50) ; and an activator member (40) being slidably accommodated in said applicator member; said main chamber and said auxiliary chamber being selectively connectable for fluid communication between said chambers upon activation of said capsule by said activator member (see page 7 lines 2-4 and figure 1)

From this, the subject-matter of independent claim 11 differs in that: the activator member comprises an internal channel system extending from the rear end of the activator member to an annular groove remote from the rear end of said activator member.

5.2 The subject-matter of claim 11 is therefore novel (Article 33(2) PCT)
The problem to be solved by the present invention may be regarded as: hermetically sealing a capsule after it has been filled in with components.

5.3 The solution to this problem proposed in claim 11 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
The provision of a channel system with an annular groove to receive a hardenable sealing material is neither known nor rendered obvious from the cited documents.

6. DEPENDENT CLAIMS 12-19

Claims 12-19 are dependent on claim 11 and as such also meet the requirements of the PCT with respect to novelty and inventive step.